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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/840,851	04/24/2001	Douglas H. Beeferman	10984-499001	5713

26161 7590 05/22/2003

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EXAMINER

TRUONG, CAM Y T

ART UNIT	PAPER NUMBER
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2172

DATE MAILED: 05/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/840,851

Applicant(s)

BEEFERMAN, DOUGLAS H.

Examiner

Cam-Y T Truong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. Claims 1-42 are pending in this Office Action.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 9-13, 15, 23-27, 29, 37-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwartz et al (USP 6405188).

As to claims 1, 15, Schwartz teaches the claimed limitations:

“establishing a database containing data corresponding to a probability that words occur together in text” as (col. 5, lines 20-35);

“receiving a phrase comprised of the words” as (col. 9, lines 45-46);

“retrieving the data for the words from the database in response to receiving the phrase” as (col. 4, lines 35-45). Schwartz fails to teach the claimed limitation “and determining, based on the data, whether to perform a text search for the phrase as a whole or for the words individually”. However, Schwartz teaches that if the training data had a query President Clinton, this query would be performed on the query engine. Next, the system trainer generates a new query. In this step, the query engine has returned a predetermined number e.g., 5 of the most relevant documents for each query found in the training data. In summary, the improved IR system estimates how much more likely a particular query word to appear in a document given that the document is

relevant to the query and given features of the query word, such as the form of the word, whether the word was in the original user query, how many of the original retrieved documents e.g., 3 out of 5 in which this word occurs, and the fraction of the documents out of all of the documents that contain this word. This information shows that the system determines the training data to perform a text search for the words individually (col. 7, lines 20-60).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Schwartz's teaching of training data to determine the ability of whether to perform text search for the phrase or for the words individually. This modification improves searching or retrieving documents and provides the most relevant documents to users.

As to claims 9, 23 and 37, Schwartz teaches the claimed limitation "the words comprise two or more words in series" as (col. 9, lines 45-46).

As to claim 10, 24 and 38, Schwartz teaches the claimed limitation "if it is determinedthe text search for the phrase as a whole" as (col. 7, lines 10-55).

As to claims 11, 25, 39, Schwartz teaches the claimed limitation "performing the text search for the wordsthe text search for the phrase as a whole" as (col. 7, lines 10-55).

As to claims 12, 26, 40, Schwartz teaches the claimed limitation "if it is determined to perform the text search for the words individually, the method further comprises: performing the text search for the words individually" as (col. 7, lines 20-40).

As to claims 13, 27, and 41, Schwartz teaches the claimed limitation "issuing a message, based on a result of the determining.....text search for the phrase as a whole or for the words individually based on a response to the message" as (col. 6, lines 20-67; col. 7, lines 10-40).

As to claim 29, Schwartz teaches the same claimed limitations in claims 1 and 15, except the claimed limitation "a memory that stores executable instructions; a processor that execute the instruction" as (col. 4, lines 53-65).

4. Claims 2-5, 16-19, 30-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwartz et al (USP 6405188) in view of Chou et al (USP 6505151).

As to claims 2, 16 and 30, Schwartz teaches the claimed limitation "searching through text from one or more documents" as (col. 3, lines 15-45). Schwartz fails to teach the claimed limitation "determining a metric indicative of the probability that the words will occur together in the text of the one or more documents". However, Schwartz teaches probability of particular words being related to a particular topic (col. 5, lines 20-25). Also, Chou teaches the ratio of the n-word combinations are calculated as $\text{word1}/\text{word2} = 22484/2778 = 12.6$ to (col. 7, lines 55-67). It would have been

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obvious to a person of an ordinary skill in the art at the time the invention was made to apply Chou's teaching of ratio of the n-word to Schwartz's system in order to improve text search effectively.

As to claims 3, 17 and 31, Schwartz discloses the claimed limitation subject matter in claims 1, 15 and 29, except the claimed limitation "the metric is determined based on a probability that the words will occur together and a probability that the words will occur individually". However, Schwartz teaches probability of particular words being related to a particular topic (col. 5, lines 20-25). Also, Chou teaches the ratio of the n-word combinations i.e., 1-word combination is calculated as $\text{word1}/\text{word2} = 22484/2778 = 12.6$. and 5-word combination word 1/word 2 = $1/1=1$ (col. 7, lines 55-67). It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Chou's teaching of the ratio of the n-word combinations to Schwartz's system in order to improve text search effectively.

As to claims 4, 18 and 32, Schwartz discloses the claimed limitation subject matter in claims 1, 15 and 29, except the claimed limitation "wherein the metric comprises a ratio of the probability that the words will occur together and the probability that the words will occur individually". However, Schwartz teaches probability of particular words being related to a particular topic (col. 5, lines 20-25). Also, Chou teaches the ratio of the n-word combinations i.e., 1-word combination is calculated as $\text{word1}/\text{word2} = 22484/2778 = 12.6$ and 5-word combination word 1/word 2 = $1/1=1$ (col.

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7, lines 55-67). It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Chou's teaching of the ratio of the n-word combinations to Schwartz's system in order to improve text search effectively.

As to claims 5, 19 and 33, Schwartz teaches the claimed limitation "the one or more documents comprise World Wide Web pages" as (col. 4, lines 45-52).

5. Claims 6, 20 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwartz et al (USP 6405188) in view of Turtle et al (USP 5488725).

As to claims 6, 20 and 34, Schwartz discloses the claimed limitation subject matter in claim 1, except the claimed limitation "comparing the data to a predetermined threshold.....performing the text search for the words individually if the data does not exceed the predetermined threshold". However, Schwartz teaches retrieving documents (col. 1, lines 25-30). Turtle teaches that phrases are treated in a manner similar to proximity terms, except that a document, which does not contain the full phrase receives a partial score for a partial phrase. For example, if a query contains the phrase Federal Tort Claims Act and a document contains the phrase tort claims but not Federal Tort Claims Act, the document will receive a score based on the frequency distribution associated with Tort Claims. FIG. 8 is a flow diagram illustrating the process of handling partial matches. As shown at step 120, the full phrase is evaluated against the collection as heretofore described. The inverse document frequency idf.sub.i is determined for the full phrase step 122, and if idf.sub.i is greater than a

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predetermined threshold e.g., 0.3 the maximum belief achieved for any subphrase or single term is selected as the belief for the partial phrase step 124. If *idf.sub.i* is smaller or equal to the threshold value 0.3, the preselected default belief 0.4 is assigned to the documents containing the partial phrase step 126 (col. 19, lines 43-60).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Turtle's teaching of phrases into Schwartz's system in order to perform phrase searching and word searching.

6. Claims 7-8, 21-22 and 35-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwartz et al (USP 6405188) in view of Turtle et al (USP 5488725) and further in view of Wong et al (USP 6128613).

As to claims 7, 21 and 35, Schwartz and Turtle disclose the claimed limitation subject matter in claim 6, 20, and 34, except the claimed limitation "wherein the text search is performed on another database". However, Schwartz teaches retrieving any items of information include web sites, articles, and other information sources (col. 4, lines 45-53). Also, Wong teaches storing documents on databases (col.1, lines 45-50).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Wong's teaching of storing documents on databases to Schwartz's system in order to allow searching/retrieving any document on different databases and provide the most relevant documents to a user.

As to claims 8, 22 and 36, Schwartz and Turtle disclose the claimed limitation subject matter in claim 7, 21, and 35, except the claimed limitation "wherein the other database comprises Web databases on the Internet". However, Schwartz teaches retrieving any items of information include web sites, articles, and other information sources (col. 4, lines 45-53). Also, Wong teaches storing documents in databases i.e., web on Internet (col. 1, lines 64-67; col. 2, lines 1-5).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Wong's teaching of storing documents in databases i.e., web on Internet to Schwartz's system in order to search/retrieve documents easily.

7. Claims 14, 28 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwartz et al (USP 6405188) in view of Husick et al (USP 5717914).

As to claims 14, 28 and 42, Schwartz discloses the claimed limitation subject matter in claim 1, 15 and 29, except the claimed limitation "wherein the one or more documents comprise a past query log". However, Schwartz teaches retrieving documents (col. 9, lines 64-65). Also, Husick teaches a query log table database 119 within the accounting database 119 is used by data center 110 (col. 36, lines 64-67).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Husick's teaching of a query log table database 119 within the accounting database 119 is used by data center 110 to Schwartz's system in order to log database during processing queries.

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Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure

Saund et al (USP 5687364).

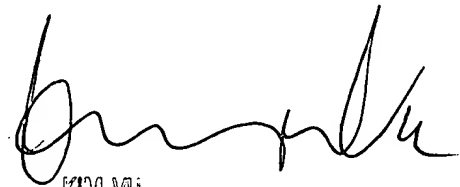
Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cam-Y Truong whose telephone number is (703-605-1169). The examiner can normally be reached on Mon-Fri from 8:00AM to 4:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu, can be reached on (703-305-4393). The fax phone numbers for the organization where this application or proceeding is assigned is (703-746-7238).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703-305-3900).

CY

5/16/03



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